

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: January 7, 2002, 16:05:24 ; Search time 77.81 Seconds

(without alignments)
21.676 Million cell updates/sec

Title: US-08-569-749-7

Sequence: 1 LARAGFYRIGSDRVACFAC.....WEKPDANSEHRHPNCPF 46

Scoring table:

BLOSUM62

Searched: 100059 seqs, 36664827 residues

Total number of hits satisfying chosen parameters: 100059

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Database: SwissProt_39:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	269	100.0	618	BIR3_HUMAN	013490 homo sapien
2	264	98.1	612	BIR3_MOUSE	062210 mus musculu
3	256	95.2	358	P1AF_PIG	062660 sus scrofa
4	248	92.2	604	BIR2_HUMAN	013489 homo sapien
5	241	89.6	600	BIR2_MOUSE	008863 mus musculu
6	192	71.4	497	BIR4_HUMAN	P98170 homo sapien
7	191	71.0	611	BIR_CHICK	090660 gallus galli
8	187	69.5	496	BIR4_MOUSE	060989 mus musculu
9	185	68.8	496	BIR4_RAT	09016 ratu
10	149	55.4	1403	BIR1_HUMAN	013075 homo sapien
11	141	52.4	1402	BIRG_MOUSE	0911b3 mus musculu
12	141	52.4	1403	BIR4_MOUSE	091b3 mus musculu
13	141	52.4	1403	BIR4_MOUSE	091b6 mus musculu
14	141	52.4	1403	BIRF_MOUSE	091b6 mus musculu
15	140	52.0	498	IAP2_DROME	024307 drosophila
16	138	51.3	1447	BIRB_MOUSE	091b6 mus musculu
17	133.5	49.6	4829	BIRB_HUMAN	091b6 mus musculu
18	132	49.1	268	IAP3_NPVOP	P14137 oryza pseu
19	129	48.0	438	IAP1_DROME	024306 drosophila
20	124	46.1	275	IAP_GYCP	P47732 chilo iride
21	117	43.5	239	ZFP_IRV6	070201 mus musculu
22	108.5	40.3	140	BIR3_MOUSE	091b7 ratu
23	108.5	40.3	142	BIR5_RAT	091b7 ratu
24	104	38.7	997	BIR1_SCHPO	015332 homo sapien
25	102.5	38.1	142	BIR5_HUMAN	P41435 auto
26	96	35.7	286	IAP1_NPVAC	010206 oryza pseu
27	93	34.6	275	IAP1_NPVOP	P41434 auto
28	80	29.7	249	IAP2_NPVAC	061318 africa
29	78.5	29.2	224	IAP1_NPVOP	011451 africa
30	73.5	27.3	224	IAP1_ASFP1	011451 africa
31	72.5	27.0	224	IAP1_ASFP3	011451 africa
32	72.5	27.0	224	IAP1_ASFP4	011451 africa
33	72.5	27.0	238	IAP1_ASFP2	011453 africa

34	63.5	23.6	278	1	HUPJ_RHOCA	Q03009 rhobacter
35	58.5	21.7	284	1	CELA_ACEXY	P27897 acetobacter
36	57	21.2	122	1	PAZ1_BOTAS	P20474 botrops as
37	56.5	21.0	181	1	VG79_HSV11	000148 icterid h
38	56	20.8	211	1	VP84_CAEEL	011107 caenorhabd
39	55	20.4	370	1	DPSD_CRIGR	P27465 cricetus
40	54.5	20.3	424	1	EXON_NPVOP	P24081 oryza pseu
41	54.5	20.3	517	1	DMPN_PSESP	P19732 pseudomonas
42	54	20.1	644	1	ARNT_DROME	015945 drosophila
43	54	20.1	954	1	BIR1_YEAST	P47134 saccharomyc
44	54	20.1	1004	1	ATNA_ARFSF	P28774 atemia san
45	53.5	19.9	525	1	YBF4_YEAST	P34219 saccharomyc

ALIGNMENTS

RESULT 1
BIR3_HUMAN STANDARD: PRT: 618 AA.
AC 013490; 016516;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 3 (INHIBITOR OF APOPTOSIS
DE PROTEIN 2) (IAP2) (IAP-2) (C-IAP1) (TNFR2-TNFR SIGNALING COMPLEX
DE PROTEIN 2) (IAP HOMOLOG B).
GN BIRC3 OR AIP2 OR IAP2 OR MIB.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Carnivora; Hominoidea; Homo.
OX NCBI_TaxID:9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE-96128127; PubMed-8548810;
RA Kothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.;
RT "The TNFR2-TNFR signaling complex contains two novel proteins related
RT to baculoviral inhibitor of apoptosis proteins.";
RL Cell 83:1243-1252(1995).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE-Liver;
RX MEDLINE-96149249; PubMed-8552191;
RA Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Chertont-Horvat G.,
RA Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.;
RT "suppression of apoptosis in mammalian cells by NAIP and a related
RT family of IAP genes.";
RL Nature 379:349-353(1996).
RN [3]
RP SEQUENCE FROM N.A.
RC TISSUE-Petal liver;
RX MEDLINE-96209843; PubMed-8643514;
RA Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vaux D.L.;
RT "Cloning and expression of apoptosis inhibitory protein homologs that
RT function to inhibit apoptosis and/or bind tumor necrosis factor
RT receptor-associated factors.";
RL Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
RN [4]
RP STRUCTURE BY NMR OF 266-363.
RX MEDLINE-99332054; PubMed-10404221;
RA Hinds M.G., Norton R.S., Vaux D.L., Day C.L.;
RT "Solution structure of a baculoviral inhibitor of apoptosis (IAP)
RT repeat.";
RL Nat. Struct. Biol. 6:648-651(1999).
RN [5]
RP FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO
FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR
NECROSIS FACTOR RECEPTOR 2 (TNFR2).
RN [6]
RP SUBCELLULAR LOCATION: CYTOPLASMIC (POTENTIAL).
RN [7]
RP TISSUE SPECIFICITY: PRESENT IN MANY FETAL AND ADULT TISSUES.
MAINLY EXPRESSED IN ADULT SKELETAL MUSCLE, THYMUS, TESTIS, OVARY,
AND PANCREAS, LOW OR ABSENT IN BRAIN AND PERIPHERAL BLOOD
LEUKOCYTES.

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CC -1- SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -1- SIMILARITY: CONTAINS 1 CARD DOMAIN.
CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
-----
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DR EMBL: LA9431; AAC41942.1; -.
DR EMBL: U45879; AAC50372.1; -.
DR EMBL: U37547; AAC50508.1; -.
DR PDB: 10BH; 20-OCT-99.
DR MIR: 601721; -.
DR InterPro: IPR001370; BIR.
DR InterPro: IPR001315; CARD.
DR InterPro: IPR001841; Znf_fing.
DR Pfam: PF00653; BIR; 3.
DR Pfam: PF00097; zf-C3HC4; 1.
DR SMART: SM00238; BIR; 3.
DR SMART: SM00114; CARD; 1.
DR SMART: SM00184; RING; 1.
DR PROSITE: PS01282; BIR_REPEAT_1; 3.
DR PROSITE: PS50143; BIR_REPEAT_2; 3.
DR PROSITE: PS50209; CARD; 1.
DR Apoptosis; Zinc-finger; Repeat; 3D-structure.
DR REPEAT 46 113 BIR 1.
DR REPEAT 184 250 BIR 2.
DR REPEAT 269 336 BIR 3.
DR DOMAIN 453 539 CARD.
DR ZN_FING 571 605 RING-TYPE.
FT CONFLICT 157 157 C -> P (IN REF. 2).
FT CONFLICT 308 308 C -> G (IN REF. 2).
FT CONFLICT 414 414 Q -> L (IN REF. 2).
FT CONFLICT 514 514 L -> W (IN REF. 2).
SQ SEQUENCE 618 AA; 69899 MW; C178D328063586D CRC64;

Query Match 100.0%; Score 269; DB 1; Length 618;
Best Local Similarity 100.0%; Pred. No. 2,3e-27;
Matches 46; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 LARAGFYIIGPDVACFACGKLSNMEPKDAMSEHRRHPNCPF 46
DB 204 LARAGFYIIGPDVACFACGKLSNMEPKDAMSEHRRHPNCPF 249

RESULT 2
BIR3_MOUSE STANDARD; PRT; 612 AA.
AC 062210; O08864;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 3 (INHIBITOR OF APOPTOSIS
DE PROTEIN 2) (MIAP2) (MIAP-2).
GN BIR3 OR API2 OR IAP2.
OS Mus musculus (mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NX NCBI_TaxID=10090;
RX [1]
RX SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
RX MEDLINE=96128127; PubMed=8548810;
RA Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.;
RT "The TNFR2-TRAF signalling complex contains two novel proteins related
RT to baculoviral inhibitor of apoptosis proteins."
RL Cell 83:1243-1252(1995).

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RN [2]
RE SEQUENCE FROM N.A.
RC TISSUE=Skeletal muscle;
RA MEDLINE=96110590; PubMed=9441758;
RX liston P., Lafeyvre C., Fong W.G., Xuan J.Y., Korneluk R.G.;
RT "Genomic characterization of the mouse inhibitor of apoptosis protein
RT 1 and 2 genes."
RN 1 and 2 genes.
CC -1- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
CC WITH TNF RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO
CC FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR
CC NECROSIS FACTOR RECEPTOR 2 (TNFR2).
CC -1- SUBCELLULAR LOCATION: CYTOPLASMIC (POTENTIAL).
CC -1- TISSUE SPECIFICITY: EXPRESSED IN HEART, BRAIN, SPLEEN, LUNG,
CC LIVER, SKELETAL MUSCLE, KIDNEY AND TESTIS.
CC -1- SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -1- SIMILARITY: CONTAINS 1 CARD DOMAIN.
CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
-----
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DR EMBL: LA9433; AAC42078.1; -.
DR EMBL: U88909; AAC53532.1; -.
DR MGD: MG1:1197009; BIR3.
DR InterPro: IPR001370; BIR.
DR InterPro: IPR001315; CARD.
DR InterPro: IPR001841; Znf_fing.
DR Pfam: PF00653; BIR; 3.
DR Pfam: PF00097; zf-C3HC4; 1.
DR SMART: SM00238; BIR; 3.
DR SMART: SM00114; CARD; 1.
DR SMART: SM00184; RING; 1.
DR PROSITE: PS01282; BIR_REPEAT_1; 3.
DR PROSITE: PS50143; BIR_REPEAT_2; 3.
DR PROSITE: PS50209; CARD; 1.
DR Apoptosis; Zinc-finger; Repeat.
FT REPEAT 46 113 BIR 1.
FT REPEAT 177 243 BIR 2.
FT REPEAT 262 329 BIR 3.
FT DOMAIN 447 533 CARD.
FT ZN_FING 565 599 RING-TYPE.
FT CONFLICT 380 380 E -> K (IN REF. 2).
SQ SEQUENCE 612 AA; 69676 MW; E08969D93C6C610D CRC64;

Query Match 98.1%; Score 264; DB 1; Length 612;
Best Local Similarity 97.8%; Pred. No. 1e-26;
Matches 45; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

OY 1 LARAGFYIIGPDVACFACGKLSNMEPKDAMSEHRRHPNCPF 46
DB 197 LARAGFYIIGPDVACFACGKLSNMEPKDAMSEHRRHPNCPF 242

RESULT 3
PIAP_PIG STANDARD; PRT; 358 AA.
AC 062640;
DT 15-DEC-1998 (Rel. 37, Created)
DT 15-DEC-1998 (Rel. 37, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE PUTATIVE INHIBITOR OF APOPTOSIS.
GN PIAP.
OS Sus scrofa (pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

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OC Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OX NCBI_TaxID=9823;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Heart;
RX MEDLINE=98162622; PubMed=9501011;
RA Stehlik C., de Martin R., Binder B.R., Lipp J.;
RT "Cytokine induced expression of porcine inhibitor of apoptosis
RT protein (Iap) family member is regulated by NF-kappa B.";
RL Biochem. Biophys. Res. Commun. 243:827-832(1998).
CC -1- SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1- SIMILARITY: CONTAINS 2 BIR REPEATS.
CC -1- SIMILARITY: CONTAINS 1 CARD DOMAIN.
CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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DR EMBL: U79142; AAC39171.1; -.
DR InterPro: IPR001370; BIR.
DR InterPro: IPR001315; CARD.
DR InterPro: IPR01841; Znf_Fing.
DR Pfam: PF00653; BIR_2.
DR Pfam: PF00619; CARD; 1.
DR Pfam: PF00097; zf-C3HC4; 1.
DR SMART: SM00238; BIR; 2.
DR SMART: SM00114; CARD; 1.
DR SMART: SM00184; RING; 1.
DR PROSITE: PS01282; BIR_REPEAT_1; 2.
DR PROSITE: PS0143; BIR_REPEAT_2; 2.
DR DR PROSITE: PS0209; CARD; 1.
KW Apoptosis; zinc-finger; Repeat.
FT REPEAT 4 70 BIR 1.
FT REPEAT 90 157 BIR 2.
FT ZN_FING 311 345 RING-TYPE.
FT SEQUENCE 358 AA; 40977 MW; EB2268FA9A6190A4 CRC64;

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RL Cell 83:1243-1252(1995).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=96149249; PubMed=8552191;
RA Liston P., Roy N., Jamal K., Lefebvre C., Baird S., Chertton-Horvat G.,
RA Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.;
RT "Suppression of apoptosis in mammalian cells by NAIP and a related
RT family of IAP genes.";
RL Nature 379:349-353(1996).
RN [3]
RP SEQUENCE FROM N.A.
RC TISSUE=Fetal liver;
RX MEDLINE=96209843; PubMed=8643514;
RA Dren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vaux D.L.;
RT "Cloning and expression of apoptosis inhibitory protein homologs that
RT function to inhibit apoptosis and/or bind tumor necrosis factor
RT receptor-associated factors.";
RL Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE=99252096; PubMed=10233894;
RA Horrevorts A.J., Fontijn R.D., van Zonneveld A.J., de Vries C.J.,
RA ten Cate J.W., Pannekoek H.;
RT "Vascular endothelial genes that are responsive to tumor necrosis
RT factor-alpha in vitro are expressed in atherosclerotic lesions,
RT including inhibitor of apoptosis protein-1, stannin, and two novel
RT genes.";
RL Blood 93:3418-3431(1999).
CC -1- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
CC WITH TNF RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO
CC FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR
CC NECROSIS FACTOR RECEPTOR 2 (TNFR2).
CC -1- SUBCELLULAR LOCATION: CYTOPLASMIC (POTENTIAL).
CC -1- TISSUE SPECIFICITY: HIGHLY EXPRESSED IN FETAL LUNG, AND KIDNEY. IN
CC THE ADULT, EXPRESSION IS MAINLY SEEN IN LYMPHOID TISSUES,
CC INCLUDING SPLEEN, THYMUS AND PERIPHERAL BLOOD LYMPHOCYTES.
CC -1- SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -1- SIMILARITY: CONTAINS 1 CARD DOMAIN.
CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
-----
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DR EMBL: LA9432; AAC41943.1; -.
DR EMBL: U45878; AAC50371.1; -.
DR EMBL: U37546; AAC50507.1; -.
DR EMBL: AF070674; AAC83232.1; -.
DR MIM: 601712; -.
DR InterPro: IPR001370; BIR.
DR InterPro: IPR001315; CARD.
DR InterPro: IPR001841; Znf_Fing.
DR Pfam: PF00653; BIR; 3.
DR Pfam: PF00619; CARD; 1.
DR Pfam: PF00097; zf-C3HC4; 1.
DR SMART: SM00238; BIR; 3.
DR SMART: SM00114; CARD; 1.
DR SMART: SM00184; RING; 1.
DR PROSITE: PS01282; BIR_REPEAT_1; 3.
DR PROSITE: PS0143; BIR_REPEAT_2; 3.
DR PROSITE: PS0209; CARD; 1.
KW Apoptosis; zinc-finger; Repeat.
FT REPEAT 29 96 BIR 1.
FT REPEAT 169 235 BIR 2.
FT REPEAT 255 332 BIR 3.
FT DOMAIN 447 525 CARD.
FT ZN_FING 557 591 RING-TYPE.

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FT CONFLICT 18 18 N -> Y (IN REF. 4).
FT CONFLICT 119 119 N -> H (IN REF. 2).
FT CONFLICT 153 153 D -> E (IN REF. 2).
FT CONFLICT 163 163 H -> P (IN REF. 2).
FT CONFLICT 165 165 A -> P (IN REF. 2).
FT CONFLICT 191 191 K -> R (IN REF. 2).
FT CONFLICT 191 191 F -> L (IN REF. 2).
FT CONFLICT 364 364 Q -> P (IN REF. 2).
SO SEQUENCE 604 AA: 68371 MW: 8581A00BA9AAB4A7 CRC64:

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Query Match 92.2% Score 248; DB 1; Length 604;
Best Local Similarity 91.3%; Pred. No. 1.2e-24;
Matches 42; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

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Qy 1 LARAGFYIIGPDVAVACFACGKLSNMERDDAMSEHRHFPNCP 46
Db 189 LAKAGFYIIGPDVAVACFACGKLSNMERDDAMSEHRHFPNCP 234

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RESULT 5
BIR2_MOUSE STANDARD: PRT: 600 AA.
AC 008863;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 2 (INHIBITOR OF APOPTOSIS
DE PROTEIN 1) (MARP1) (MARP-1).
GN BIRC2 OR API1 OR IAP1.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Skeletal muscle;
RA MEDLINE=98110590; PubMed=9441758;
RA Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk R.G.;
RT "Genomic characterization of the mouse inhibitor of apoptosis protein
RT 1 and 2 genes."
RL Genomics 46:495-503(1997).
CC -1- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
CC WITH TNF RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO
CC FORM AN HETEROOMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR
CC NECROSIS FACTOR RECEPTOR 2 (TNFR2) (BY SIMILARITY).
CC -1- SUBCELLULAR LOCATION: CYTOPLASMIC (POTENTIAL).
CC -1- SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -1- SIMILARITY: CONTAINS 1 CARD DOMAIN.
CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
CC -----
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CC -----
CC EMBL: U08908; AAC53531.1; -
CC WGS: MG1:119707; Birc2.
CC InterPro: IPR001370; BIR.
CC InterPro: IPR001315; CARD.
CC InterPro: IPR001841; Znf_ring.
CC Pfam: PF00653; BIR_3.
CC Pfam: PF00619; CARD_1.
CC Pfam: PF00697; Zf-C3HC4; 1.
CC SMART: SM00238; BIR; 3.
CC SMART: SM00114; CARD; 1.
CC SMART: SM00184; RING; 1.
CC PROSITE: PS01282; BIR_REPEAT_1; 3.
CC PROSITE: PS0143; BIR_REPEAT_2; 3.

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DR PROSITE: PS0209; CARD: 1.
KW Apoptosis; zinc-finger; Repeat.
FT REPEAT 27 94 BIR 1.
FT REPEAT 167 233 BIR 2.
FT REPEAT 253 320 BIR 3.
FT DOMAIN 444 512 CARD.
FT ZN_FING 553 587 RING-TYPE.
SO SEQUENCE 600 AA: 67198 MW: AD7F73E849317D1 CRC64:

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Query Match 89.6% Score 241; DB 1; Length 600;
Best Local Similarity 89.1%; Pred. No. 9.6e-24;
Matches 41; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

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Qy 1 LARAGFYIIGPDVAVACFACGKLSNMERDDAMSEHRHFPNCP 46
Db 187 LAKAGFYIIGPDVAVACFACGKLSNMERDDAMSEHRHFPNCP 232

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RESULT 6
BIR4_HUMAN STANDARD: PRT: 497 AA.
AC P98170; Q9NO14;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 4 (INHIBITOR OF APOPTOSIS
DE PROTEIN 3) (X-LINKED INHIBITOR OF APOPTOSIS PROTEIN) (X-LINKED IAP)
DE (IAP-LIKE PROTEIN) (HILP).
GN BIRC4 OR API3 OR IAP3 OR XIAP.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Fetal brain;
RA MEDLINE=96149249; PubMed=8552191;
RA Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Chertont-Horvat G.,
RA Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.;
RT "Suppression of apoptosis in mammalian cells by M1P and a related
RT family of IAP genes."
RL Nature 379:349-353(1996).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Fetal heart;
RA MEDLINE=96256286; PubMed=8654366;
RA Duckett C.S., Nava V.E., Gedrich R.W., Clem R.J., Van Dongen J.L.,
RA Gillilan M.C., Shiels H., Hardwick J.M., Thompson C.B.;
RT "A conserved family of cellular genes related to the baculovirus iap
RT gene and encoding apoptosis inhibitors."
RL Embo J. 15:2685-2694(1996).
RN [3]
RP SEQUENCE FROM N.A.
RC TISSUE=Dry;
RA Graffham D.;
RT submitted (APR-2000) to the EMBL/GenBank/DBJ databases.
RN [4]
RP MEDLINE=97373959; PubMed=9230442;
RA Derynck O.L., Takahashi R., Saivesen G.S., Reed J.C.;
RT "X-linked IAP is a direct inhibitor of cell-death proteases."
RL Nature 386:300-304(1997).
CC -1- FUNCTION: APOPTOTIC SUPPRESSOR. INHIBITOR OF CASPASE-3 AND
CC CASPASE-7.
CC -1- SUBCELLULAR LOCATION: CYTOPLASMIC.
CC -1- TISSUE SPECIFICITY: UBIQUITOUS, EXCEPT PERIPHERAL BLOOD
CC LEUKOCYTES.
CC -1- SIMILARITY: BELONGS TO THE IAP FAMILY.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
CC -----
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EMBL: U16842: AAC52594.1: -
EMBL: U088990: AAB8376.1: -
MGI: M107572: BIRC4.
InterPro: IPR001370: BIR.
Pfam: PF00653: BIR; 3.
InterPro: IPR001841: ZnF_ring.
Pfam: PF00097: zf-C3HC4; 1.
SMART: SM00238: BIR; 3.
SMART: SM00184: RING; 1.
PROSITE: PS01282: BIR_REPEAT_1; 3.
PROSITE: PS50143: BIR_REPEAT_2; 3.
Apoptosis; zinc-finger; Repeat.
REPEAT 26 93 BIR 1.
REPEAT 163 230 BIR 2.
REPEAT 264 329 BIR 3.
ZNF_RING 449 483 RING-TYPE.
CONFLICT 208 208 E -> K (IN REF. 2).
CONFLICT 317 317 E -> D (IN REF. 2).
CONFLICT 322 322 W -> C (IN REF. 2).
CONFLICT 346 346 S -> P (IN REF. 2).
CONFLICT 360 360 S -> P (IN REF. 2).
CONFLICT 388 388 I -> L (IN REF. 2).
CONFLICT 449 449 C -> S (IN REF. 2).
CONFLICT 462 462 V -> F (IN REF. 2).
CONFLICT 468 468 V -> A (IN REF. 2).
CONFLICT 490 490 K -> N (IN REF. 2).
SEQUENCE 496 AA; 56079 MW; EC5FAB0799F2CD8 CRC64;

Query Match 69.5% Score 187; DB 1: Length 496;
Best Local Similarity 71.7% Pred. No. 7, 9e-17;
Matches 33; Conservative 1; Mismatches 12; Indels 0; Gaps 0;

1 LARGFYITGPDVACPCGCKLSNWKPKDAMSEHRHFPNCF 46
184 LASAGLYTTCADQVCCGCKLKNWPCDRAWSHRHFPNCF 229

RESULT 9
ID BIR4_RAT STANDARD; PRT; 496 AA.
AC 09R016;
DT 20-AUG-2001 (Rel. 40, Created)
DT 20-AUG-2001 (Rel. 40, Last sequence update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 4 (INHIBITOR OF APOPTOSIS
PROTEIN 3) (X-LINKED INHIBITOR OF APOPTOSIS PROTEIN) (X-LINKED IAP)
DE (IAP HOMOLOG A) (RIAP3) (RIAP-3).
OS Rattus norvegicus (Rat).
GN BIRC4 OR API3 OR XIAP.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP SEQUENCE FROM N.A.
RA Salto N.;
RT "Rattus norvegicus X-linked inhibitor of apoptosis (riap3) mRNA."
RL Submitted (OCT-1999) to the EMBL/Genbank/DBJ databases.
CC - FUNCTION: APOPTOTIC SUPPRESSOR. INHIBITOR OF CASPASE-3 AND
CASPASE-7 (BY SIMILARITY).
CC - SUBCELLULAR LOCATION: CYTOPLASMIC (BY SIMILARITY).
CC - SIMILARITY: BELONGS TO THE IAP FAMILY.
CC - SIMILARITY: CONTAINS 3 BIR REPEATS.
CC - SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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EMBL: AB033366: BAA85304.1: -
InterPro: IPR001370: BIR.
InterPro: IPR001841: ZnF_ring.
Pfam: PF00653: BIR; 3.
Pfam: PF00097: zf-C3HC4; 1.
SMART: SM00238: BIR; 3.
SMART: SM00184: RING; 1.
PROSITE: PS01282: BIR_REPEAT_1; 3.
PROSITE: PS50143: BIR_REPEAT_2; 3.
Apoptosis; zinc-finger; Repeat.
REPEAT 26 93 BIR 1.
REPEAT 163 230 BIR 2.
REPEAT 264 329 BIR 3.
ZNF_RING 449 483 RING-TYPE.
SEQUENCE 496 AA; 56072 MW; E250E3C77461A469 CRC64;

Query Match 68.8% Score 185; DB 1: Length 496;
Best Local Similarity 71.7% Pred. No. 1, 4e-16;
Matches 33; Conservative 1; Mismatches 12; Indels 0; Gaps 0;

1 LARGFYITGPDVACPCGCKLSNWKPKDAMSEHRHFPNCF 46
184 LASAGLYTTCADQVCCGCKLKNWPCDRAWSHRHFPNCF 229

RESULT 10
ID BIR1_HUMAN STANDARD; PRT; 1403 AA.
AC 013075; 013730; 099796; 075857;
DT 01-NOV-1997 (Rel. 35, Created)
DT 20-AUG-2001 (Rel. 40, Last sequence update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 1 (NEURONAL APOPTOSIS
INHIBITORY PROTEIN).
GN BIRC1 OR NAIP.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Carnivora; Homiidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Fetal brain;
RX MEDLINE=95113344; PubMed=7813013;
RA Roy N., Mahadevan M.S., McLean M., Shucder G., Yaraghi Z.,
RA Farahini R., Baird S., Besner-Johnston A., Lefebvre C., Kang X.,
RA Saito M., Aubry H., Tamai K., Guan X., Ioannou P., Crawford T.O.,
RA de Jong P.J., Suth L., Ikeda J., Korneluk R.G., Mackenzie A.;
RT "The gene for neuronal apoptosis inhibitory protein is partially
deleted in individuals with spinal muscular atrophy."
RL Cell 80:167-178(1995).
RN [2]
RP SEQUENCE FROM N.A. AND REVISIONS.
RC TISSUE=Brain;
RX MEDLINE=9616755; PubMed=9503025;
RA Chen Q., Baird S.D., Mahadevan M., Besner-Johnston A., Parahani R.,
RA Xuan J.-Y., Kang X., Lefebvre C., Ikeda J.E., Korneluk R.G.,
RA Mackenzie A.E.;
RT "Sequence of a 131-kb region of 5q13.1 containing the spinal muscular
atrophy candidate genes SMN and NAIP."
RL Genomics 48:121-127(1998).
RN [3]
RP SEQUENCE OF 386-623 FROM N.A.
RA der Streng G., Draaijers T.G., Grootsoorten P.M., Ozinga J.,
RA Anzerling R., Velona I., Brahe C., Scheffer H., van Omme G.J.B.,
RA Buys C.H.C.M.;
RL Submitted (MAY-1995) to the EMBL/Genbank/DBJ databases.

```
RN [4]
RA SEQUENCE OF 222-1403 FROM N.A.
RP Jones K., Graves T., McPherson J.;
RL Submitted (JUN-1998) to the EMBL/Genbank/DBJ databases.
RN FUNCTION.
RC TISSUE=Liver;
RX MEDLINE=6619249; PubMed=8552191;
RA Liston P., Roy N., Tamai K., Lefebvre C., Balid S., Chertont-Horvat G.,
RA Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.;
RT "Suppression of apoptosis in mammalian cells by NAIP and a related
RT family of IAP genes";
RL Nature 379:349-353(1996)
CC -1- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY A VARIETY OF
CC SIGNALS.
CC -1- TISSUE SPECIFICITY: EXPRESSED IN MOTOR NEURONS, BUT NOT IN SENSORY
CC NEURONS. FOUND IN LIVER AND PLACENTA, AND IN A LESSER EXTENT IN
CC SPINAL CORD.
CC -1- DISEASE: MUTATED OR DELETED FORMS OF NAIP HAVE BEEN FOUND IN
CC INDIVIDUALS WITH SPINAL MUSCULAR ATROPHY TYPE I (SMA TYPE I). SMAS
CC ARE FATAL AUTOSOMAL RECESSIVE DISORDERS SUBCLASSIFIED AS TYPE I
CC (VERONIG-HOEFMANN DISEASE), TYPE II (INTERMEDIATE FORM), AND TYPE
CC III (WOLFFHART-KUGELBERG-WELANDER DISEASE) BASED UPON THE AGE OF
CC ONSET AND CLINICAL SEVERITY. THESE NEURODEGENERATIVE DISORDERS ARE
CC CHARACTERIZED BY DEGENERATION OF LOWER MOTOR NEURONS, LEADING TO
CC PROGRESSIVE PARALYSIS MUSCULAR ATROPHY. CONCERNS 1 IN 6000
CC NEBORN.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -----
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CC -----
DR EMBL; U19251; AAC52045.1; -
DR EMBL; U80017; AAC52047.1; -
DR EMBL; U21913; AAA64504.1; -
DR EMBL; AC005031; AAC62261.1; -
DR MIM; 600355; -
DR InterPro: IP001370; BIR.
DR Pfam: PF00653; BIR; 3.
DR SMART: SMO0238; BIR; 3.
DR PROSITE: PS01282; BIR_REPEAT_1; 3.
DR PROSITE: PS0143; BIR_REPEAT_2; 3.
KM Apoptosis; Repeat.
FT REPEAT 60 127 BIR 1.
FT REPEAT 159 227 BIR 2.
FT REPEAT 278 345 BIR 3.
FT CONFLICT 222 223 PK -> YR (IN REF. 4).
FT CONFLICT 386 387 VP -> ST (IN REF. 3).
FT CONFLICT 535 535 M -> V (IN REF. 3).
FT CONFLICT 553 553 Y -> H (IN REF. 3).
FT CONFLICT 1228 1231 MISSING (IN REF. 4).
SQ SEQUENCE 1403 AA; 159613 MW; 566304C154DA5E64 CRC64;
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Query Match 55.4%; Score 149; DB 1; Length 1403;
Best Local Similarity 54.3%; Pred. No. 1,9e-11;
Matches 25; Conservative 6; Mismatches 15; Indels 0; Gaps 0;
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RESULT 11
ID BIR_MOUSE STANDARD; PRT; 1402 AA.
AC Q9JIB3;
DT 20-AUG-2001 (Rel. 40, Created)
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DT 20-AUG-2001 (Rel. 40, Last sequence update)
DE 20-AUG-2001 (Rel. 40, Last annotation update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 1G (NEURONAL APOPTOSIS
DE INHIBITORY PROTEIN 7).
RN BIR1G OR NAIP7.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=20414747; PubMed=10958627;
RA Endrizzi M.G., Hadinoto V., Growney J.D., Miller W., Dietrich W.F.;
RT "Genomic sequence analysis of the mouse Naip gene array";
RL Genome Res. 10:1095-1102(2000).
CC -1- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY A VARIETY OF
CC SIGNALS.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
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CC -----
DR EMBL; AF242433; AAF82749.1; -
DR MGD; MGI:1858256; Birc1g.
DR InterPro: IP001370; BIR.
DR Pfam: PF00653; BIR; 3.
DR SMART: SMO0238; BIR; 3.
DR PROSITE: PS01282; BIR_REPEAT_1; 2.
DR PROSITE: PS0143; BIR_REPEAT_2; 3.
KM Apoptosis; Repeat; Multigene family.
FT REPEAT 60 127 BIR 1.
FT REPEAT 159 227 BIR 2.
FT REPEAT 278 345 BIR 3.
SQ SEQUENCE 1402 AA; 159662 MW; C1DFB3A359893E0D CRC64;
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Query Match 52.4%; Score 141; DB 1; Length 1402;
Best Local Similarity 52.2%; Pred. No. 2e-10;
Matches 24; Conservative 4; Mismatches 18; Indels 0; Gaps 0;
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RESULT 12
ID BIR_MOUSE STANDARD; PRT; 1403 AA.
AC Q9QWK5; Q9JIB3;
DT 20-AUG-2001 (Rel. 40, Created)
DT 20-AUG-2001 (Rel. 40, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 1A (NEURONAL APOPTOSIS
DE INHIBITORY PROTEIN 1).
CN BIR1A OR NAIP1 OR NAIP.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RA Yaraoglou Z., Korneluk R.G., Mackenzie A.E.;
RT "Cloning and characterization of the multiple copies of the murine
RT homologue of NAIP (neuronal apoptosis inhibitory protein).";
RL Submitted (JUN-1997) to the EMBL/Genbank/DBJ databases.
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=99431676; PubMed=10501978;
```



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RESULT 14
BIRF_MOUSE STANDARD; PRT: 1403 AA.
ID BIRF_MOUSE
AC Q9JIB6; P81704; 009122; 009121;
DT 20-AUG-2001 (Rel. 40, Created)
DT 20-AUG-2001 (Rel. 40, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 1F (NEURONAL APOPTOSIS
INHIBITORY PROTEIN 5).
GN BIRCF OR NAIP6 OR NAIP-RSA.
OS Mus musculus (mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=20414747; PubMed=10958627;
RA Endrizzi M.G., Hadinoto V., Growney J.D., Miller W., Dietrich W.F.;
RT "Genomic sequence analysis of the mouse Naip gene array.";
RL Genome Res. 10:1095-1102(2000).
RN [2]
RP SEQUENCE OF 82-168 FROM N.A.
RX STRAIN=129/SYJ;
RA MEDLINE=97131520; PubMed=8975718;
RA Schaff J.M., Damron D., Frisella A., Bruno S., Beggs A.H.,
RA Kunkel L.M., Dietrich W.F.;
RT "The mouse region syntenic for human spinal muscular atrophy lies
RT within the Igml critical interval and contains multiple copies of Naip
RT exon 5.";
RL Genomics 38:405-417(1996).
CC -1- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY A VARIETY OF
CC SIGNALS.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -----
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CC -----
DR EMBL: AF242431; AAF82751.1;
DR EMBL: U66327; AAC32975.1;
DR MGI: 1296222; Birc1f.
DR InterPro: IPR001370; BIR.
DR Pfam: PF00653; BIR; 3.
DR SMART: SM00238; BIR; 3.
DR PROSITE: PS01283; BIR_REPEAT_1; 2.
DR PROSITE: PS01283; BIR_REPEAT_2; 3.
KW Apoptosis; Repeat; Multigene family.
FT REPEAT 60 127 BIR 1.
FT REPEAT 159 227 BIR 2.
FT REPEAT 278 345 BIR 3.
SQ SEQUENCE 1403 AA; 159823 MW; 9D491250358C4E9 CRC64;

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Query Match 52.4%; Score 141; DB 1; Length 1403;
Best Local Similarity 52.2%; Pred. No. 2,1e-10;
Matches 24; Conservative 4; Mismatches 18; Indels 0; Gaps 0;

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QY 1 LARAGFYIGPDRVACPGKGLMSEKDDAMSEHRRHPNCPF 46
DB 181 LSNAGFVFTGKRDVOCFSCGSLGNHEGDDPKKHAHKKPKCF 226

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RESULT 15
IAP2_DROME STANDARD; PRT: 498 AA.
ID IAP2_DROME
AC Q24307; Q24177; Q24115; Q24149; Q9V7G1;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)

```

```

DE APOPTOSIS 2 INHIBITOR (INHIBITOR OF APOPTOSIS 2) (DIAP2) (DIAP) (IAP
HOMOLOG A) (IAP-LIKE PROTEIN) (DILP).
IAP2 OR ILP OR DIPA OR CG8293.
GN Drosophila melanogaster (fruit fly).
OC Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
OC Ephydroidea; Drosophilidae; Drosophila.
OX NCBI_TaxID=7227;
RN [1]
RP SEQUENCE FROM N.A.
RX TISSUE=Eye; imaginal disk;
RA Hay B.A., Massarman D.A., Rubin G.M.;
RT "Drosophila homologs of baculovirus inhibitor of apoptosis proteins
RT function to block cell death.";
RL Cell 83:1253-1262(1995).
RN [2]
RP SEQUENCE FROM N.A.
RX TISSUE=Embryo;
RA Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Chertom-Horvat G.,
RX MEDLINE=96149249; PubMed=8552191;
RA Parahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.;
RT "Suppression of apoptosis in mammalian cells by NAIP and a related
RT family of IAP genes.";
RL Nature 379:349-353(1996).
RN [3]
RP SEQUENCE FROM N.A.
RX STRAIN=CANTON-S;
RA MEDLINE=96256286; PubMed=8654366;
RA Duckett C.S., Nava V.E., Gedrich R.W., Clem R.J., van Dongen J.L.,
RA Gillilan M.C., Shuels H., Hardwick J.M., Thompson C.B.;
RT "A conserved family of cellular genes related to the baculovirus Iap
RT gene and encoding apoptosis inhibitors.";
RL EMBO J. 15:2685-2694(1996).
RN [4]
RP SEQUENCE FROM N.A.
RX STRAIN=CANTON-S;
RA Rose J.L.;
RL Thesis (1991), Vanderbilt University / Nashville, U.S.A.
RN [5]
RP SEQUENCE FROM N.A.
RX STRAIN=BERKELEY;
RA MEDLINE=20196006; PubMed=10731132;
RA Adams M.D., Celisner S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galie R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Mortimer J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Brandon R.C., Rogers Y.-H.C., Blazer R.G., Champe M., Pfeiffer B.D.,
RA Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Abail J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Borovoy D., Botchan M.R., Bouck J., Brodeur P., Brotler P.,
RA Burks K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport U.B., Davies P.,
RA de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Durbin K.J., Evangelista C.C., Ferraz C., Ferriere S., Fleischmann W.,
RA Foster C., Gabriellian A.E., Gary N.S., Gelbart W.M., Glasser K.,
RA Glodok A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegam C.,
RA Jalali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kuip D., Lai X.,
RA Lasro P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
RA Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,
RA Merkulov G., Milshina N.V., Modarity C., Morris J., Moshrefi A.,
RA Mount S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
RA Nelson D.M., Nelson K.A., Nixon K., Nusskern D.R., Pacle J.M.,
RA Palazzolo M., Piltan G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Reiert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Strong R., Sun E.,

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Search completed: January 7, 2002, 16:05:25
Job time: 1404 sec

RA Svltas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
RA Wang Z.-Y., Wassarman D.A., Weinstein G.M., Weissbach J.,
RA Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhan G., Zhan Q., Zheng L.,
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RN [6]
RP SEQUENCE OF 17-498 FROM N.A.
RC TISSUE=Larva;
RX MEDLINE=96209843; PubMed=8643514;
RA Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vaux D.L.;
RT "Cloning and expression of apoptosis inhibitory protein homologs that
RT function to inhibit apoptosis and/or bind tumor necrosis factor
RT receptor-associated factors.";
RT Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
CC -1- FUNCTION: APOPTOTIC SUPPRESSOR. OVEREXPRESSION SUPPRESSES RPR AND
CC HTD-DEPENDENT CELL DEATH IN THE EYE.
CC -1- DEVELOPMENTAL STAGE: EXPRESSED AT HIGH LEVELS THROUGHOUT
CC DEVELOPMENT. BELONGS TO THE IAP FAMILY.
CC -1- SIMILARITY: CONTAINS 3 BIR REPEATS.
CC -1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
CC -----
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CC -----
DR EMBL: L49441; AAC1630.1; -
DR EMBL: U45801; AAC46988.1; -
DR EMBL: U32373; AAC4715.1; -
DR EMBL: M96581; -; NOT_ANNOTATED_CDS.
DR EMBL: AE003808; AAF58095.1; -
DR Flybase: FBgn0015247; Iap2.
DR InterPro: IPR001370; BIR.
DR InterPro: IPR001841; znf_ring.
DR Pfam: PF00653; BIR; 3.
DR Pfam: PF00097; zf-C3HC4; 1.
DR SMART: SM00184; RING; 1.
DR SMART: PS01282; BIR_REPEAT_1; 3.
DR PROSITE: PS0143; BIR_REPEAT_2; 3.
DR Apoptosis; Zinc-finger; Repeat.
KW REPEAT 9 76 BIR 1.
FT REPEAT 113 179 BIR 2.
FT REPEAT 212 279 BIR 3.
FT ZN_FING 451 485 RING-TYPE.
FT CONFLICT 5 5 G -> V (IN REF. 2).
FT CONFLICT 40 40 N -> K (IN REF. 2).
FT CONFLICT 64 65 ER -> AG (IN REF. 3).
FT CONFLICT 94 94 E -> K (IN REF. 1).
FT CONFLICT 282 282 A -> D (IN REF. 6).
FT CONFLICT 286 286 A -> S (IN REF. 3).
FT CONFLICT 302 302 P -> Q (IN REF. 2 AND 5).
FT CONFLICT 303 303 P -> T (IN REF. 6).
FT CONFLICT 327 327 A -> T (IN REF. 2).
FT CONFLICT 369 376 ALEVEEP -> DMRCASR (IN REF. 3).
SQ SEQUENCE 498 AA; 54506 MW; 66EC36DA6ED2AD6 CRC64;

Query Match 52.0%; Score 140; DB 1; Length 498;

Best Local Similarity 51.1%; Pred. No. 9.8e-11;
Matches 23; Conservative 6; Mismatches 16; Indels 0; Gaps 0;

QY 1 LARACFYTGDRVACGAGCGKLSNWKDAMSEHRRHFPNCP 45

DB 133 LAKAGFYTLNRDLHVKVCWNGVIAKMKNDAPFEHRKFPPOCP 177
